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TREATMENT OF ECLAMPSIA.*

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The prophylactic treatment of eclampsia should be instituted as soon as any of the prodromic symptoms of auto-intoxication are present. In this connection I wish to digress from the subject of the paper to say that it is the duty of every physician to try to impress upon the minds of those applying to him for obstetric care, the necessity of promptly reporting any and all symptoms of ill health, and not to be satisfied with an occasional urinary examination for albumen only.

By this means, many cases of mild intoxication may be detected and, by suitable means, the more profound poisoning prevented.

As soon as symptoms denoting the existence of auto-intoxication, such as cephalgia, which is tenacious, and most marked in the morning; vomiting; insomnia; malaise; vertigo; epigastric pain, disturbance of vision, and edema of the anterior tibial region and of the hands and face, are present, absolute rest in bed, freedom from all mental care and worry and a liberal supply of oxygen are of utmost importance. The diet should consist essentially of milk, varied with buttermilk, malted milk, crackers and well cooked cereals. In the event of pernicious

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vomiting, rectal feeding should be instituted for a short time.

Hot colonic irrigations every six hours either with the Kemp or long rubber tube are of value; as is the augmentation of cutaneous elimination produced by warm baths and the maintenance of an even temperature.

Nitroglycerine is used to reduce arterial tension and to facilitate elimination; also tincture of strophanthus in event of cardiac weakness with rapid feeble pulse. Citrate of caffein is of value for the same purposes. An occasional dose of calomel followed by a saline or castor oil is indicated for hepatic congestion and to insure emptying of the intestinal tract.

When patients fail to show signs of improvement and the toxic symptoms become more pronounced under the foregoing treatment we are then left but one alternative, namely, the emptying of the uterus. This last statement is made with the knowledge that objections will be raised by some, on the ground that it conflicts with their religious belief and teaching. To those I would only say that their own consciences should be their guides.

We will now pass on to the consideration of antepartum eclamptic convulsions and to understand the treatment better, these cases are best divided into two classes.

First, those women who are large, plethoric, cyanotic and with high tension pulse; they require venesection or the hypodermatic administration of veratrum viride, either the fluid extract or Norwood's tincture in 20 minim doses repeated at short enough intervals to reduce the pulse to 60.

The second class includes the thin and anemic

women with low tension pulse, for whom nitroglycerine and morphine hypodermatically are the drugs. The convulsions should be controlled by chloroform inhalation, and care taken that the tongue is not mutilated. For this purpose the method of Farnier is the best. It consists in taking a small towel or piece of cloth, stretching it between the hands and placing it against the extended tongue, pushing it backward into the mouth behind the dental arch. When the teeth close spasmodically they are prevented by the towel from coming into apposition.

The bowels should be unloaded by enema and one drop of ol. tiglii in a drachm of olive oil placed on the back of the tongue. No time should be lost in evacuation of the uterus in either class of cases, as by this means the convulsions in the majority of cases are terminated. The method to be pursued depends upon several factors—size of bony canal, condition of cervix, and viability or non-viability of the fetus, as well as upon the condition of the woman. When we are fortunate enough to find a canal of ample size and the cervix soft and dilatable, we then have only to decide whether it should be manual or bag dilatation and delivery of the fetus by version or forceps for the viable and the small non-viable. For the purpose of minimizing the amount of traumatism to the maternal soft parts, craniotomy is the best method of delivery of a large dead fetus.

Unfortunately, eclampsia occurs very frequently in the primipara with a small vagina, and a long, hard, rigid and undilatable cervix. It is in this class of cases that the obstetrician of to-day is especially interested, as the vaginal Cesarian section of Dührs-

sen has proved itself a surgical procedure of merit. It has the advantage of being rapid and produces less shock and traumatism to the patient than by any other method of delivery that can be used in this class of cases.

Essentially a hospital operation, it should be undertaken only by one familiar with operative work; and requires the proper instrument and ample assistance. Under chloroform-oxygen anesthesia, with vulva and vagina prepared, a weighted speculum is introduced. After the anterior lip of the cervix is grasped by tenacula, one on either side and brought down the T-incision of Webster is then made in the anterior vaginal wall and the bladder is separated and pushed up, care being taken that it is separated well off on both sides. By the use of the Pryor towel retractor, the bladder is held well up out of harm's way. Traction sutures now replace the tenacula and serve the double purpose of tractors and anatomical guides for use after delivery when the sutures are being introduced. If the tenacula are allowed to remain on they are likely to be very much in the way during delivery, and if they are then removed hurriedly, there is no guide left for bringing together the opposite parts. With straight, heavy scissors the anterior uterine wall is then incised from the external os to a sufficient distance above the internal os to allow of ample space for rapid delivery. The height of the incision depends, of course, upon the size of the fetus; which estimate is made at the time. Valuable time is lost in trying to deliver through too small an incision.

It is well to introduce traction sutures at the level of the internal os at the time of cutting through that portion of the uterus, as they are of

great service when, after delivery, it is necessary to introduce sutures into the uppermost angle of the incision, which is difficult without this help. Delivery is done by craniotomy and the basiotribe when the fetus is well developed and not living, or by version if it is viable. When the fetus is large and viable and the vagina small, delivery may be facilitated and laceration of the perineum prevented by right-sided or double episiotomy. Immediately after delivery of the placenta, the uterus is packed with gauze. The uterine muscularis is brought together with interrupted No. 2 chromic gut sutures at half inch intervals, care being taken that they go down to, but do not include the mucous membrane. Tight closure of the external os is not desirable as it may interfere with proper drainage.

The vaginal incision is then closed, leaving a small opening for drainage of the utero-vesical space; the drain in this location is to remain in for from 12 to 24 hours; the uterine gauze to be removed when the suturing is completed; and then the patient is returned to bed in the Fowler position.

The entire operation can be done in thirty minutes or less and the amount of blood loss is less than in an average normal labor. Oxygen is administered and the patient frequently returns to consciousness after coming out of the anesthetic. In considering the post-operative care of these patients I would first say that ergot is contraindicated.

It is necessary to bear in mind the two types previously mentioned, namely, the plethoric, cyanotic, high tension pulse patient and the anemic low tension case.

In the former, veratrum hypodermatically to keep

the pulse down to sixty, the dosage required depending upon the individual case. It was a long time before I learned what constituted a sufficiently reduced pulse tension from the use of veratrum in eclampsia. A tension that is lowered enough in eclampsia would fill one with alarm in any other condition.

Thin, anemic, low tension pulse patients do well with nitroglycerine, citrate of caffein, intravenous saline infusion and hypodermatoclysis. Hot packs, dry cups, hot water bags, sinapisms, and hot poultices are useful in stimulating kidney and cutaneous elimination. Calomel gr. i on the tongue every hour for ten doses, and increasing quantities of water by mouth as nausea disappears, should be allowed. Chloral hydrate in drachm doses by rectum may be used to diminish spasm and control restlessness.

Oxygen started when the chloroform is given and continued after delivery is of great advantage. I am of the opinion that the beneficial effects of oxygen in eclampsia is often disregarded.

In closing I wish to report the following case:

Mrs. S., age 37, born in Ireland, primipara, admitted to the M. E. Hospital, 3:30 A. M., October 10, 1908. Family history negative. Had scarlet fever and diphtheria in childhood. Menstruated at 14; 28-day type, no pain. Married two years, one miscarriage at two months, one year before present illness. She became pregnant in May and had considerable vomiting, constipation and slight headache from early pregnancy.

On October 9th, after feeling very miserable all day she suddenly, in the evening, become unconscious and had one convulsion before the ambulance was sent for, which was followed by three more in an hour, comatose in the interval.

A specimen of urine, secured by catheter "boiled solid"; heart, negative; a few crepitant râles heard

over the chest posteriorly. Tongue lacerated and bleeding. Edema pronounced over the entire body. Uterus about 10 c.m. above symphysis, well contracted and tense. Upon vaginal examination the cervix was found to be long, firm, rigid and undilatable.

I performed a vaginal Cesarean section under chloroform anesthesia and delivered a dead fetus by version.

There were no post-partum convulsions but complete consciousness was not restored for twenty-four hours.

The post-operative treatment consisted in nothing by mouth, but water and calomel, gr. i., dry on the tongue every hour for ten doses; external heat, hot packs, hot rectal irrigation, sinapisms and cups over the kidneys. Fluid extract veratrum, 10 minims every two hours, to keep pulse at 60. Oxygen given freely and chloral hydrate 3ss by rectum every three hours, when necessary for restlessness. The Fowler position was used and the vaginal drain removed at the end of twenty-four hours. Milk and lime water allowed on the second day and cereals on the third. Basham's mixture prescribed on the sixth day. The patient was out of bed in a chair on the seventeenth day. She was discharged five days later, at which time there was good union of the suture lines and the uterus was well contracted and anteflexed.

At a subsequent examination, six weeks after operation, a fine line of union of all incisions was found; the only irregularity being a small dimple in the anterior cervical lip. The patient had regained her usual health. The urine contained a very faint trace of albumen, 5.50 gr. of urea to the ounce, and no casts.

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